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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,155	BONA, CSABA	
	Examiner	Art Unit	
	CASSANDRA DECKER	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Claim Objections

1. Claims 10, 14, and 16 are objected to because of the following informalities. Appropriate correction is required.

For Claim 10, "N networks" should be corrected to -—the N networks---.

For Claim 14 and 16, "comprises" on line 2 should be corrected to ---comprise---

Claim Rejections – 35 USC 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

For Claim 12, there is no support in the specification for the case where N is not equal to the number of networks and the number of packet types. Consider, let N=5, every fifth bit may be placed in the first type of packet and the remaining bits in the second type of packet.

4. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

For Claim 13, the specification does not enable at least two networks with zero common nodes, as the dual networks described share at least the sender terminal and receiver terminal.

Claim 14 is rejected as depending from a rejected claim.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 6, 8, and 15-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For Claim 6, "each identity connecting the sender terminal device and the receiver to a respective one of the two networks" does not clearly link the "each identity" with appropriate antecedents. Consider amending to the following: "each identity respective of the sender terminal device and the receiver".

For Claim 8, "a last packet of at least one of the two types of packets" does not clearly indicate what is meant by "last": Is this last packet the last packet to be transmitted of the original message? Of the original message having been broken into the two types of packets? The last packet to be received? If it is the last packet to be transmitted, there is no guarantee, given the temporal separation of transmission, that it will be the last packet received.

For Claim 15, it is not clear what is associated "with physical, spectral and temporal separation": "sending the electronic data", "each network", or "multiple packet types".

Claims 16 and 17 are rejected as depending from a rejected claim.

Claim Rejections – 35 USC 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 11 and 15-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Shu et al. (US 2003/0115364).

For Claim 11, Shu teaches a method for transmitting electronic data comprising:

preprocessing the data into at least two types of packets (see Figure 5 and paragraphs 33-36); and

sending the at least two types of packets to a receiver via at least two separate networks, the at least two types of packets separated physically, spectrally and temporally during transmission of the electronic data (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

For Claim 15, Shu teaches a communication system for transmitting electronic data, the system comprising:

a sending terminal for separating the electronic data into multiple packet types (see Figure 5 and paragraphs 33-36) and sending the electronic data to a receiving

terminal via a plurality of separate and independent networks, each network associated with one of the multiple packet types, with physical, spectral and temporal separation (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

For Claim 16, Shu teaches the system, wherein the multiple packet types comprises a first packet type and a second packet type (see Figure 5 and paragraphs 33-36), the plurality of separate and independent networks including a first network and a second network, wherein packets of the first packet type are sent on the first network and packets of the second type are sent on the second network (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

Claim Rejections – 35 USC 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1, 2, 4-6, 8-10, 12, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shu et al. (US 2003/0115364) in view of de la Torre et al. (US 2003/0065656).

For Claim 1, Shu teaches a method for transmitting electronic data comprising:

preprocessing the data, at a sender's side, into N types of packets (see Figure 5, paragraphs 33-36); and

sending the N types of packets to a receiver independently of one another, with physical, spectral, and temporal separation via N networks (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

Shu does not teach combining every N-th bit into one type of the N types of packets, where N is an integer greater than or equal to two. However, de la Torre teaches combining every N-th bit into one type of the N types of packets, where N is an integer greater than or equal to two (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

For Claim 2, Shu further teaches the method, characterized in that the sender preprocesses the data into two types of packets (4u, 4g) (see Figure 5 and paragraphs 33-36) which are sent to the receiver independently of one another, separated via two networks (5u, 5g) with time-shifted transmission (see paragraphs 20 and 37:

independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks).

For Claim 4, Shu further teaches the method characterized in that bits in an original bit sequence of an original message are combined into one type of packet and bits are combined into another type of packet.

Shu does not teach combining every N-th (N=2) bit into one type of the N types of packets. However, de la Torre teaches combining every N-th (N=2) bit into one type of the N types of packets (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

For Claim 5, Shu further teaches the method, characterized in that the electronic data is sent via a sender terminal device, connected to the two networks, the sender terminal device having an individual identity associated with each of the two networks (see paragraphs 37, 38, and 41).

For Claim 6, Shu further teaches the method characterized in that the receiver includes corresponding individual identities associated with each of the two networks, each identity connecting the sender terminal device and the receiver to a respective one of the two networks (see paragraphs 37 and 38).

For Claim 8, Shu further teaches the method, characterized in that the two types of packets can be assembled at the receiver into an original message according to a message identification transmitted within a last packet of at least one of the two types of packets (see paragraph 105: segment identifiers).

For Claim 9, Shu further teaches the method, characterized in that the temporal separation comprises a time shift between transmissions in the two networks produced by the different paths taken for each of the two types of packets (see paragraph 98).

For Claim 10, Shu further teaches the method, characterized in that the transmission in N networks takes place over wires and/or wirelessly (see paragraph 18).

For Claim 12, Shu does not teach the method, wherein preprocessing the data into at least two types of packets includes combining every Nth bit into one type of the at least two types of packets, where N is a whole number greater than or equal to two.

However, de la Torre teaches combining every Nth bit into one type of the at least two types of packets, where N is a whole number greater than or equal to two (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

For Claim 17, Shu does not teach the system, wherein bits of the electronic data having odd-numbered bit positions are combined into the first packet type and bits having even-numbered bit positions are combined into the second packet type.

However, de la Torre teaches the system, wherein bits of the electronic data having odd-numbered bit positions are combined into the first packet type and bits having even-numbered bit positions are combined into the second packet type (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission system of Shu.

10. Claims 3, 7, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shu et al. (US 2003/0115364) and de la Torre et al. (US 2003/0065656) as applied to claims 1, 2, 11, and 12 above, and further in view of Preston et al. (US 2002/0032853).

For Claims 3 and 7, the references as applied above do not teach the method characterized in that the two types of packets (4u, 4g) are sent via the two separate networks (5u, 5g) containing no common nodes, or that the devices which are responsible for forwarding packets in a respective network are each connected to only one network. However, Preston et al. teach the two types of packets (4u, 4g) being sent

via the two separate networks (5u, 5g) containing no common nodes, and devices which are responsible for forwarding packets in a respective network being each connected to only one network (see paragraph 46 and Figure 4).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to use the dynamic link allocation functions of Preston et al. in the network traffic camouflaging system of Shu and de la Torre. The motivation for doing so would be to achieve the application transparency advantages of the system according to Preston.

For Claim 13, as understood in light of the rejection under 35 USC 112, first paragraph, the references as applied above do not teach the method wherein the at least two separate networks exist independently of one another and contain zero common nodes. However, Preston teaches the at least two separate networks existing independently of one another and containing zero common nodes (see paragraph 46 and Figure 4).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to use the dynamic link allocation functions of Preston et al. in the network traffic camouflaging system of Shu and de la Torre. The motivation for doing so would be to achieve the application transparency advantages of the system according to Preston.

For Claim 14, Shu further teaches the method, wherein the at least two types of packets comprises a first type of packets and a second type of packets (see Figure 5 and paragraphs 33-36), and the at least two networks including a first network and a

second network, the first type of packets being sent on the first network and the second type of packets being sent on the second network (see paragraphs 20 and 37: independent transmission; paragraph 98: geographic and temporal separation; paragraphs 63, 45: separate networks; see paragraph 59: wireless and optical transmission media indicate spectral separation).

Shu does not teach the first type of packets including odd bits of the electronic data and the second type of packets including even bits of the electronic data. However, de la Torre teaches the first type of packets including odd bits of the electronic data and the second type of packets including even bits of the electronic data two (see Figure 17 and paragraph 107: bit-wise round-robin distribution of data).

Thus it would have been obvious to a person of ordinary skill in the art at the time of invention to distribute bits among the packets of Shu in a round robin manner as taught by de la Torre. The motivation for doing so would be to provide the efficiency and security benefits of de la Torre (see paragraph 5) to the data transmission method of Shu.

Response to Arguments

The amendment filed 25 February 2009 is acknowledged and accepted.

The rejections under 35 USC 112, second paragraph, of claims 1, 2-5, and 9 are withdrawn in view of the amendments thereto. However, the rejection of Claim 8 is maintained and a new rejection of Claim 6 has been made.

The rejections of Claims 1, 7, and 10 under 35 USC 102(b) over Fujimori (US 5995506) are withdrawn in view of the amendments thereto.

With regards to the teaching of sending packets "physical, spectral, and temporal separation", please note that Shu does have this teaching (see paragraph 98: geographic and temporal separation; see paragraph 59: wireless and optical transmission media indicate spectral separation). With regards to multiple networks, Shu suggests this teaching as well (see paragraphs 63 and 45, and Figure 6: note that the only common nodes are the sender and receiver), and Preston teaches the separate networks existing independently of one another and containing zero common nodes (see paragraph 46 and Figure 4).

With regards to the teaching that a last packet is required to reassemble the message, as indicated in relation to claim 8, please note that this requirement is not claimed. Moreover, claim 8 discloses the possibility of more than one "last packet" ("a last packet of at least one of the two types of packets", in which case it is indefinite which of the last packets is, in fact, last) and thereby encompasses the teaching of redundancy which applicant states teaches away from the invention in Shu.

Accordingly, the rejections under 35 USC 103 are not withdrawn.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CASSANDRA DECKER whose telephone number is (571) 270-3946. The examiner can normally be reached on Monday through Friday, 7:30 am to 4:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel J. Ryman can be reached on (571) 272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cassandra Decker/
Examiner, Art Unit 2419
4/21/2009

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